

DESCRIPTION & USES
of
SOLID WIRE GLASS



PENNSYLVANIA WIRE GLASS CO.
PENNSYLVANIA - BLDG.
PHILADA., PENNA.

CATALOG
Of
PENNSYLVANIA
"SOLID"
WIRE GLASS
and Glass without Wire

A Complete Index can be found on the Inside Back Cover

Why Wire Glass should be Used

A Fire Retardant



AS manufactured by the Pennsylvania Continuous Process, "SOLID" Wire Glass has proven highly valuable to the individuals, firms, and corporations employing it in retarding and withstanding the encroachments of fire.

A Safeguard to Human Life

Since "SOLID" Wire Glass, through its peculiar properties of construction, does not splinter and fly apart in the manner common to plain glass, when attacked by fire or assailed by the shock of a blow or explosion, it is a safe-guard to human life.

An Important Factor in Building Economy

"SOLID" Wire Glass makes practical the transmission of pure daylight from without to the interior of a building through roof and wall openings, while safe-guarding against the dangers referred to above.

An Important Factor in Reducing Insurance Rates

"SOLID" Wire Glass reduces the charges by Fire Underwriters on exposed openings, and pays for its initial installation over and over again by the reduction which it effects in Insurance Rates.

FD 90-62587 TCE

Identification and Approval

OUR Wire Glass, $\frac{1}{4}$ " and over in thickness, designated as Fire Retardant No. 76 by the National Board of Fire Underwriters, has their full approval as a Fire Retardant.

Extracts from Rules and Requirements of the National Board of Fire Underwriters.

THICKNESS OF GLASS: "Wire glass to have a thickness of at least $\frac{1}{4}$ of an inch at the thinnest point."

SIZE OF GLASS: "The unsupported surface of the glass allowed shall be governed by the severity of exposure and be determined in each case by the Underwriters having jurisdiction, but in no case shall it be more than 48 inches in either dimension or exceed 720 square inches." "Provided with a distinctive marking."

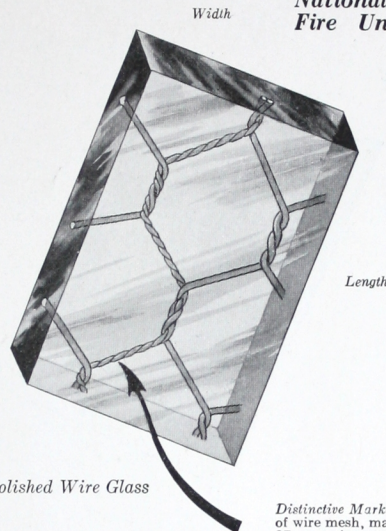
Windows, Doors and Partitions not to Exceed 720 Square Inches.

WINDOWS, doors, and partitions should be specified for such sizes as 15" x 48", 18" x 40", 20" x 36", and 24" x 30" to conform to the above rule where dimensions are not to exceed 720 square inches.

Depth of Rabbet, and Style of Metal Frames and Sash.

THERE are also restrictions and regulations governing the depth of the rabbet ($\frac{3}{4}$ " deep), bearing of the glass ($\frac{5}{8}$ "), and the style of the metal frames and sash to meet the demands of fire retardant construction, and to permit glazing.

*Approved by the
National Board of
Fire Underwriters*



Distinctive Mark—Consists of a strand of wire mesh, made by twisting two No. 27 gage wires together, and spacing such distinctive cabled strand approximately ten inches apart in each sheet of glass.

*Underwriters'
Specifications*

GLASS 76—August 12, 1910.

Pennsylvania Wire Glass Co., Manufacturers,
Pennsylvania Building, Philadelphia, Pa.
Solid Wired Glass.

Wired glass protection is not equivalent to that furnished by standard fire doors and shutters, except for moderate exposures. Notice is called to the need of using standard frames, glazing and glass of the required thickness.

Approved for protection against moderate exposures when used in sizes not exceeding 720 square inches, mounted in standard window frames and provided with distinctive marking consisting of a strand of the wire mesh made by twisting two No. 27 gage wires together, and spacing such distinctive cabled strand approximately ten inches apart in each sheet of glass manufactured.

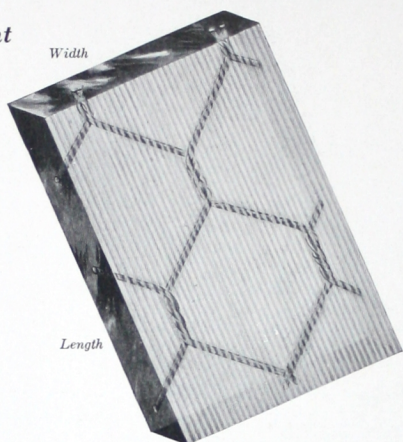
In the ribbed pattern the distinctive marking cannot be seen when the glass is inspected from the ribbed side, but can be found quite easily from the opposite side. It can be observed from either side of the rough or polished pattern. It is incorporated in the glass, will serve to identify the glass made by this company and will distinguish the glass made and sold for use as a fire retardant from that which does not comply with the requirements.

This card replaces 76, dated Feb. 13, 1907. (filed continuous wired glass.)

Facsimile of Card showing approval of "SOLID WIRE GLASS" by the National Board of Fire Underwriters.

Ribbed "Solid" Wire Glass

**Excellent Light
Diffuser**



Ribbed Wire Glass

IS made, as name implies,
with a ribbed surface, that
diffuses the light.

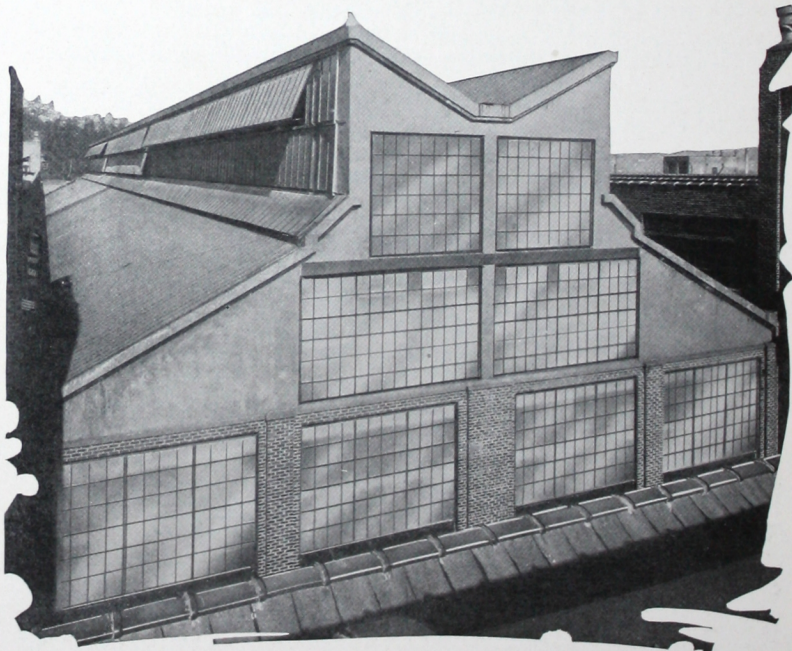
USES—

Skylights
Windows
Monitors
Partitions
Doors
Transoms
Railroad Sheds
Elevator Enclosures

Thickness Maximum Sizes

	Width	Length
$\frac{1}{8}$ "	60" x	110"
$\frac{1}{4}$ "	61" x	140"
$\frac{3}{8}$ "	61" x	140"

*Kelly-Springfield Tire Company
—Cumberland, Md. Installation
of Pennsylvania "Solid" Wire
Glass.*



Rough "Solid" Wire Glass



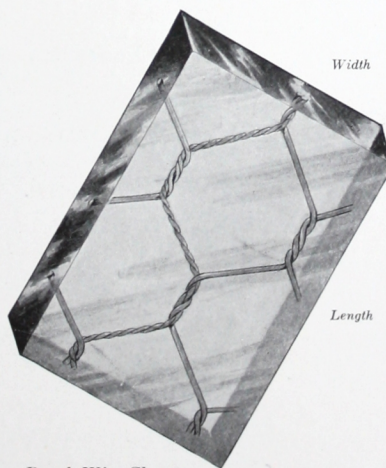
*General Electric Company,
Lynn, Mass. Showing
installation of Pennsylv-
ania "Solid" Wire Glass.*

This glass has a slightly rough surface—sometimes called Hammered.

USES—

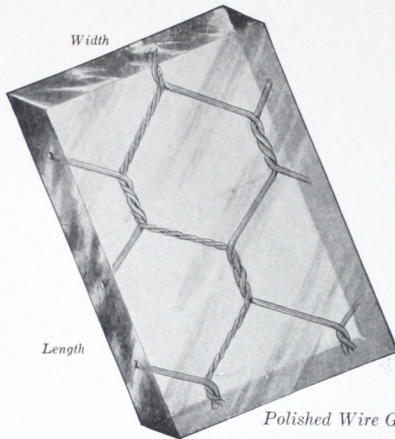
Skylights
Windows
Monitors
Partitions
Doors
Transoms
Railroad Sheds
Elevator Enclosures

Thickness	Maximum Sizes
	Width Length
$\frac{1}{8}$ "	60" x 110"
$\frac{1}{4}$ "	61" x 140"
$\frac{3}{8}$ "	61" x 140"



Rough Wire Glass

Polished "Solid" Wire Glass



Unobstructed Vision Fire-Proof Qualities

"Polished" Wire Glass, like all our other wire glass, is made by the "SOLID" Continuous Process. It is especially adapted for doors and windows where fire-retardant glass is required and transparency needed. It permits unobstructed vision, yet preserves all the fire-proof qualities so essential to modern fire-proof structures.

Our Product Represents Highest Type of Manufacture

"Polished" Wire Glass is cast as rough glass, and, after careful selection to insure the most perfect sheets, the rough glass is ground and polished on both sides. It is quite impossible in the present state of the art to secure immunity from all defects. But, the product of our Pennsylvania "SOLID" Continuous Process represents the highest type of manufacture in every respect. Particularly is this true of its light-transmitting and strength properties.

USES—

Windows
Doors
Elevator Enclosures.

Thickness	Maximum Size	
	Width	Length
$\frac{1}{4}$ "	60"	x 120"

*Administration Building in which
Polished Wire Glass is installed.*



Cobweb "Solid" Wire Glass

The Ideal Light Diffuser

Widespread Popularity

"Cobweb" Wire Glass has now been on the market for a number of years, and because of its peculiarly valuable properties has grown into widespread popularity.

Charm of "COBWEB"

In "Cobweb", delicacy and stability are well and harmoniously combined. Its well rounded contour, freedom from sharp and deep angles, makes it a non-dust and non-dirt catcher, unlike so many other figured patterns. The wire in it is scarcely noticeable a few feet distant.

*Decorative without
sacrificing strength*



USES—

Particularly adapted for Elevator Enclosures
Deck lights

*Not a dust and dirt
collector.*

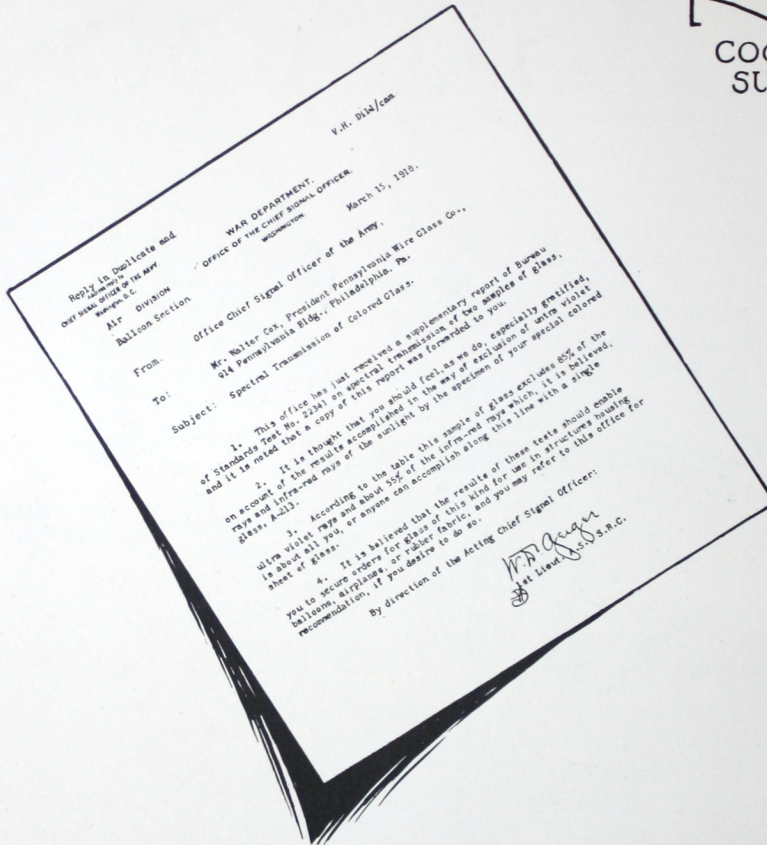
Thickness	Maximum Sizes	
	Width	Length
$\frac{1}{8}$ "	60"	110"
$\frac{1}{4}$ "	61"	140"



*City Hall, Philadelphia, in which
Cobweb Wire Glass is used for
Elevator Enclosures.*

~ Heat

COOLER IN
SUMMER



The illustration on the opposite page shows the enormous hangar at Scott Field, Belleville, Ill. where thousands of feet of Actinic Wire Glass were used. Actinic Glass is the *only* glass manufactured which practically eliminates eye strain, color fading and fabric deterioration. Complete details about various forms and sizes to suit all requirements can be found on pages 10 and 11.

Intercepting - **GLASS**

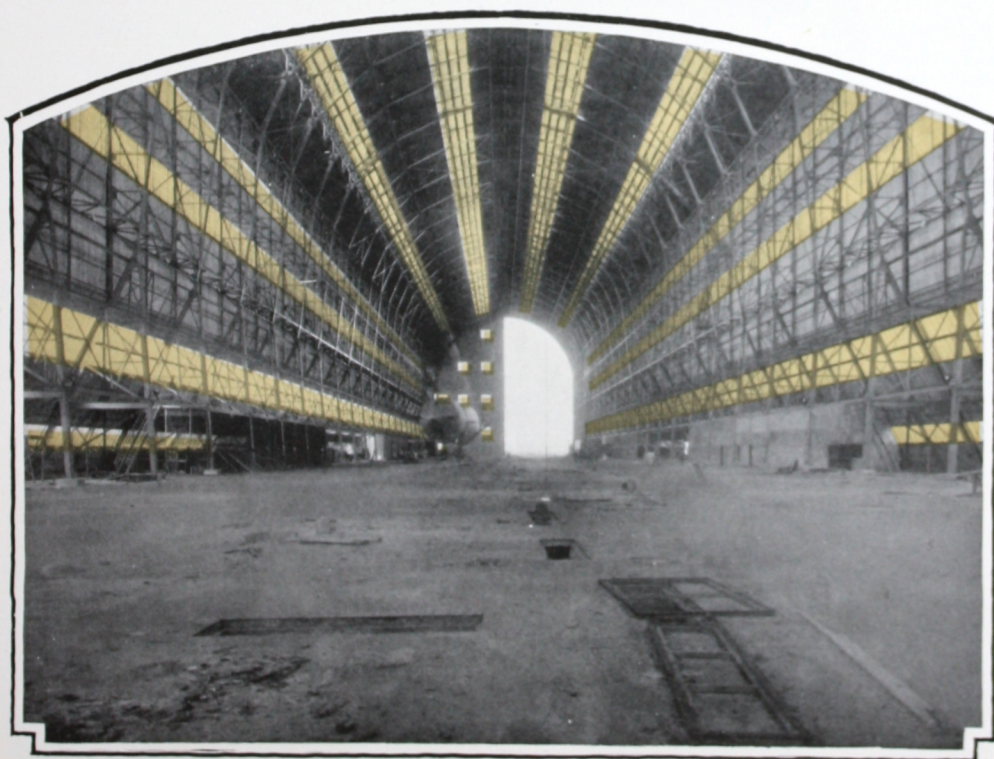
WARMER IN
WINTER

USES

Skylights
Windows
Doors

Transoms
of
Warehouses
Factories
Train Sheds
Hangars

Schools
Public
Buildings
Libraries
Laboratories



Interior view, Airship Hangar, Scott Field, Belleville, Ill., showing use of Actinic Wire Glass.

Ribbed and Rough Actinic Glass

(Without Wire)

(Trade Mark)



Ribbed Actinic Glass

A HEAT-intercepting glass (amber tinted) that excludes 85% of the Ultra-Violet (glare) rays and not only prevents the deterioration of fabrics, such as silk and rubber, but also prevents the harmful effects of these rays on the eyes.

The Infra-Red (heat) rays have been authoritatively proven to tire the eyes. By excluding 55% of these rays, eye fatigue—with its resultant inefficiency—is eliminated by Actinic glass.

This glass is particularly desirable for use in school windows to protect the children's eyes.

Prevents fading of colors.

Made in various patterns, with and without wire, to suit all requirements.

Actinic Glass tested by the United States Bureau of Standards. (Report on request.)

It may be the one glass that will solve your problem. Our Engineering staff will advise you—Free.

USES—

Side Wall Sash
Transoms
Windows

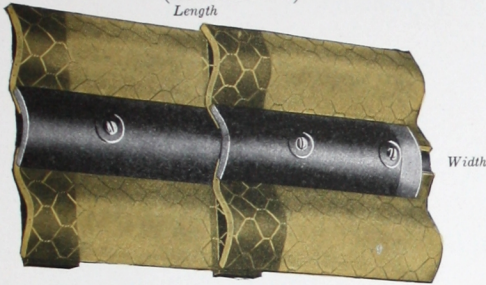
Thickness	Maximum Sizes	
	Width	Length
$\frac{1}{8}$ "	56"	x 120"
$\frac{3}{16}$ "	60"	x 126"
$\frac{1}{4}$ "	62"	x 140"



Rough Actinic Glass

Actinic Wire Glass

(Trade Mark)



CWG Deep Angle Actinic



Ribbed Wire Actinic

This glass has exactly the same properties as Actinic Glass described on page 10, except that it has a wire netting incorporated.

Actinic glass makes a building much cooler in summer—warmer in winter, with no perceptible loss of illumination.

Surfaces	Thickness
Ribbed	$\frac{1}{4}$ "
Rough	$\frac{1}{4}$ "
CWG, Deep Angle	$\frac{5}{16}$ "

Maximum Sizes	
Width	Length
61"	x 140"
61"	x 140"
56"	x 126"

Combines strength with glare and heat intercepting qualities.

Actinic the name of a special kind of glass

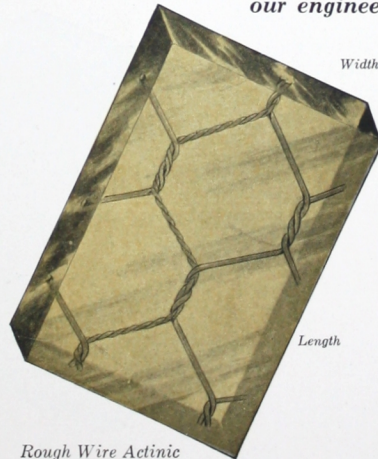
Consult our engineering staff.

USES—

Railroad Sheds
Skylights
Windows
Monitors



Standard Paper Manufacturing Co., Richmond, Va., installed Actinic Glass to prevent fading of their product.



Rough Wire Actinic

Ribbed Glass and Rough Glass

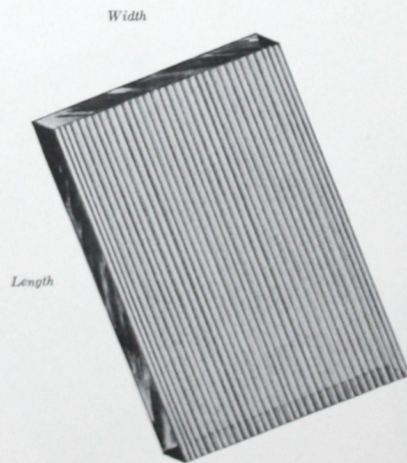
(Without Wire)

USES—

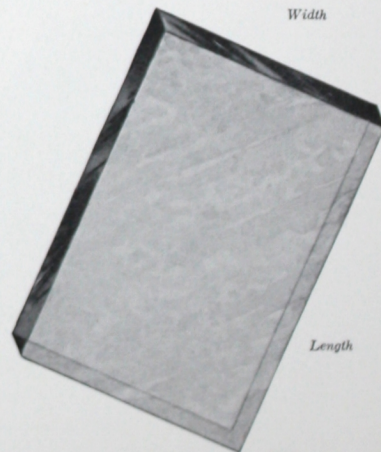
*For use where
fire protection is
not needed.*

Skylights
Windows in Industrial Buildings
Power Plants
Warehouses and Train Sheds

Thickness	Maximum Sizes	
	Width	Length
$\frac{1}{8}$ "	56"	x 120"
$\frac{3}{16}$ "	60"	x 126"
$\frac{1}{4}$ "	62"	x 140"
$\frac{3}{8}$ "	62"	x 140"



Ribbed Glass



Rough Glass

Florentine Glass and Cobweb Glass

(Without Wire)



Florentine Glass



Cobweb Glass

Florentine Glass—One of the most popular figured glasses.

Cobweb Glass—The ideal light diffuser.

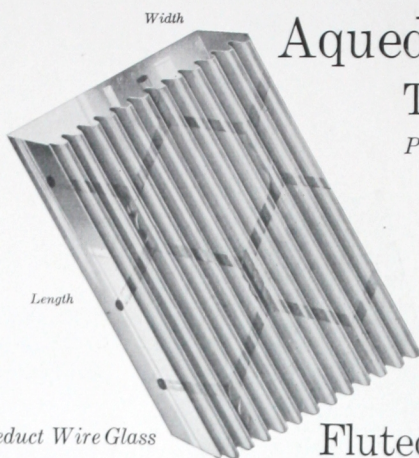
***Two Forms of
Decorative Glass***

USES—

Partitions especially.

Deck Lights.

Thickness	Maximum Sizes	
	Width	Length
$\frac{1}{8}$ "	56"	120"
$\frac{3}{16}$ "	56"	120"



Aqueduct Wire Glass

Aqueduct "Solid" Wire Glass

The Ideal Skylight Glass

Prevents Dripping of Condensation

ONE of the principal difficulties in the way of satisfactory skylight service is the dripping of condensation from the under side of the glass. In some instances a moderate amount of drip does not matter greatly, but in others a single drop on the goods being made or stored below spells serious damage or absolute ruin. If kept comparatively clean, "AQUEDUCT" Wire Glass positively does away with this hazard.

*Fluted surface thru
Capillary attraction
carries off condensation*

*Absolutely prevents
Dripping*

Fluted Surface Takes Advantage of Capillary Attraction

The reason "Aqueduct" Wire Glass does away with dripping is because it has a fluted surface on its under side. The channels are of such size and form as to take greatest advantage of what is known as "capillary attraction." When set at an angle of 10 degrees or more, and kept reasonably clean, "Aqueduct" Wire Glass will carry off all condensation. See report of Test No. 14757, Bureau of Standards.

It has a full $\frac{1}{4}$ inch body with many supporting webs.
It is a most brilliant light diffuser.
It gives the greatest capillary attraction.
It has a hard, smooth weather surface.
It cuts freely.

USES—

Skylights particularly

Thickness

$\frac{1}{4}$ " Body and Supporting Webs.

Maximum Sizes

Width Length
60" x 136"



Showing use of Aqueduct Wire Glass in skylight

Corrugated Wire Glass

The acknowledged new standard for

Roofs
Skylights
Side Walls
Canopies
Marquises
Louvres
Area Coverings

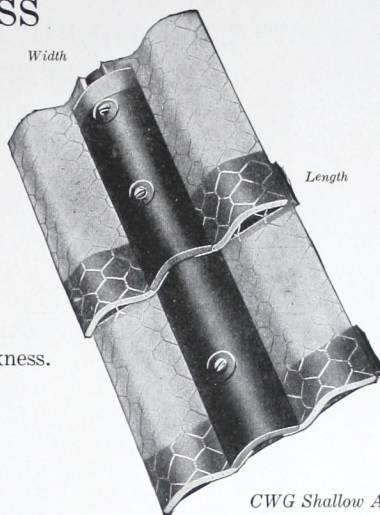
Seven times stronger than flat glass of same thickness.

No glare, greater illumination.

No steel sash required.

Nothing to wear out or deteriorate.

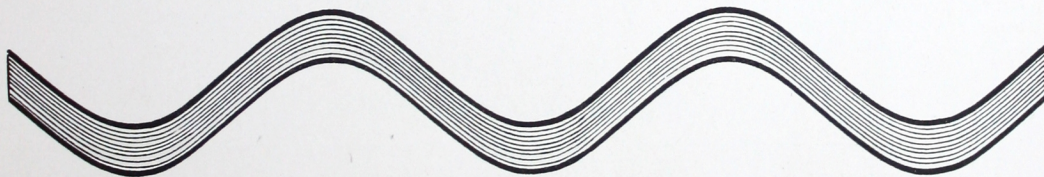
Withstands vibration.



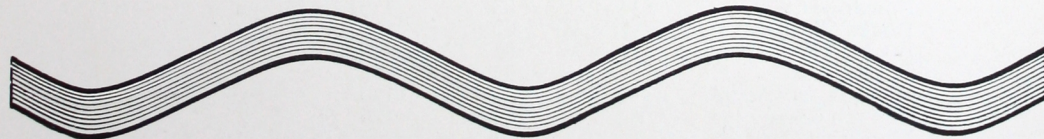
CWG Shallow Angle

Approved by the Investigating Committee of Architects and Engineers. Report sent on request.

Send for special forty-page illustrated catalog on Corrugated Wire Glass, giving views of installations, working drawings and other valuable engineering data.



Deep Angle CWG is $2\frac{1}{2}$ " pitch C. to C.



Shallow Angle CWG is 2 11-16" pitch C. to C.

Surface	Thickness	Standard Sizes Recommended	
		Width	Length
Deep Angle	$\frac{5}{16}$ "	$27\frac{3}{4}$ "	x 42" and 63"
Shallow Angle	$\frac{5}{16}$ "	$26\frac{1}{2}$ "	x 42" and 63"
Deep Angle, Actinic	$\frac{5}{16}$ "	$27\frac{3}{4}$ "	x 42" and 63"

Thicknesses, Maximum Sizes and Approximate Weights of Pennsylvania “Wire Glass” and “Glass Without Wire”

“Wire Glass”				
Style	Thickness Inches	Maximum Width Inches	Maximum Length Inches	Approximate Weight per Sq. Ft., Lbs.
Ribbed Wire Glass	$\frac{1}{8}$	60	110	$2\frac{1}{4}$
Ribbed Wire Glass	$\frac{1}{4}$	61	140	$3\frac{1}{2}$
Ribbed Wire Glass	$\frac{3}{8}$	61	140	$5\frac{1}{4}$
Ribbed Wire Glass	$\frac{1}{2}$	48	130	$6\frac{1}{2}$
Rough Wire Glass	$\frac{1}{8}$	60	110	$2\frac{1}{4}$
Rough Wire Glass	$\frac{1}{4}$	61	140	$3\frac{1}{2}$
Rough Wire Glass	$\frac{3}{8}$	61	140	$5\frac{1}{4}$
Rough Wire Glass	$\frac{1}{2}$	48	130	$6\frac{1}{4}$
Cobweb Wire Glass	$\frac{1}{8}$	60	110	$2\frac{1}{4}$
Cobweb Wire Glass	$\frac{1}{4}$	61	140	$3\frac{1}{2}$
Polished Wire Glass	$\frac{1}{4}$	60	120	$3\frac{1}{2}$
Aqueduct Wire Glass	$\frac{1}{4}$	60	136	$4\frac{1}{2}$
Ribbed Wire Actinic	$\frac{1}{4}$	61	140	$3\frac{1}{2}$
Rough Wire Actinic	$\frac{1}{4}$	61	140	$3\frac{1}{2}$
CWG Deep Angle	$\frac{5}{16}$	56	126	$4\frac{1}{2}$
CWG Shallow Angle	$\frac{5}{16}$	54	126	$4\frac{1}{2}$
CWG Deep Angle Actinic	$\frac{5}{16}$	56	126	$4\frac{1}{2}$

“Glass Without Wire”				
Ribbed Glass	$\frac{1}{8}$	56	120	2
Ribbed Glass	$\frac{3}{16}$	60	126	$2\frac{1}{2}$
Ribbed Glass	$\frac{1}{4}$	62	140	$3\frac{1}{2}$
Ribbed Glass	$\frac{3}{8}$	62	140	$5\frac{1}{4}$
Rough Glass	$\frac{1}{8}$	56	120	2
Rough Glass	$\frac{3}{16}$	60	126	$2\frac{1}{2}$
Rough Glass	$\frac{1}{4}$	62	140	$3\frac{1}{2}$
Rough Glass	$\frac{3}{8}$	62	140	$5\frac{1}{4}$
Ribbed Glass Actinic	$\frac{1}{8}$	56	120	2
Cobweb Glass	$\frac{1}{8}$	56	120	2
Florentine Glass	$\frac{1}{8}$	56	120	2

Width is across the twist of the wire netting.

Length runs with the twist of the wire netting.

Always specify width first.

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Our engineers are at your service. They will gladly furnish you complete details regarding any proposed installation. Of course there is no obligation.

Just a Few of the Hundreds of Nationally Known Users of

Pennsylvania "SOLID" WIRE GLASS.

Baldwin Locomotive Works

General Electric Co.

Ford Motor Co.

Kelly Springfield Tire Co.

U. S. Steel Corporation

Johns-Manville Co.

Firestone Tire & Rubber Co.

Goodyear Tire & Rubber Co.

B. F. Goodrich Co.

International Harvester Co.

E. I. Du Pont DeNemours Co.

Packard Motor Co.

Lincoln Motor Co.

Buick Motor Co.

General Motors Corp.

National Cash Register Co.

Westinghouse Electric & Mfg. Co.